

## **REMARKS**

### **Claim Amendments**

Applicant has cancelled claims 4 and 6-8; amended claims 1, 3, and 5; and added claims 9-11 with this amendment.

Claims 1-3, 5, and 9-11 are pending. Claims 1, 3, and 5 have been amended to more distinctly define the claimed subject matter. Support for new claims 9-11 can be found in the as-filed application, for example, in original claims 6-8; page 3, lines 1-4; page 4, lines 25-29; and page 32, lines 2-7. Accordingly, no new matter has been added.

### **Rejections under 35 U.S.C. §101 and § 112, second paragraph**

Claims 6-8, second medical use claims, were rejected under 35 U.S.C. §§ 101 and 112, second paragraph, for allegedly being indefinite. The claims have been cancelled, rendering the rejection moot.

Claim 4 was rejected under 35 U.S.C. § 112, second paragraph for allegedly being indefinite. Applicant has canceled this claim, as the Examiner suggested, rendering the rejection moot.

### **Rejection under 35 U.S.C. § 112, first paragraph—enablement**

Claim 5 stands rejected for allegedly failing to comply with the enablement requirement of 35 U.S.C. § 112, first paragraph. Specifically, the Examiner asserts that undue experimentation would be required of the skilled artisan to make and use compounds of the instant claims [and optionally] “another medicament.”

Without acquiescing to the Examiner's reasoning, the term "and optionally another medicament" has been deleted from claim 5. Applicant respectfully requests withdrawal of the rejection and reconsideration of the amended claim.

#### **Rejections under 35 U.S.C. § 103(a)**

Claims 1-5 stand rejected as allegedly obvious over International Publication No. WO 98/22459. Specifically, the Examiner asserts that the compounds of the instant claims include positional isomers or analogs of those disclosed in the '459 publication, which would supposedly be obvious for a PhD-level synthetic organic chemist to try to make. Applicant respectfully disagrees.

As disclosed on page 4 of the specification, the modifications in the instantly claimed compounds have the unexpected property of improved efficacy over those disclosed in the '459 publication. The compound synthesized in, for example, Example 7 (I-7), has affinity and selectivity for the 5-HT<sub>1A</sub> receptor similar to the most efficacious compound disclosed in the '459 publication (I-66), but surprisingly elicits far stronger binding of [<sup>35</sup>S]GTPγS in a cell-membrane preparation (see the table on page 31 of the specification). The instantly-claimed compounds are the strongest agonists identified to date, with efficacies close to or indiscernible from serotonin (5-HT), a native receptor ligand.

A prima facie case of obviousness, based on close structural similarity is rebuttable by unexpected or superior results. MPEP § 2144.09 (VII). The instantly claimed compounds exhibit **both** unexpected and superior results relative to the allegedly obvious variants in the '459 publication, including the most efficacious

compound disclosed therein. Accordingly, the '459 publication renders none of the pending claims obvious.

Withdrawal of the rejection and reconsideration of the amended claims is respectfully requested.

### **Obviousness-type double patenting**

Claims 1-5 were rejected under the judicially-created doctrine of (non-statutory) obviousness-type double patenting. Allegedly the claimed compounds are not patentably distinct from those of U.S. Patent Nos. 6,020,345 or 6,448,268. Applicant respectfully disagrees.

U.S. Patent No. 6,020,345 issued from the US national stage entry of PCT/FR97/02097, originally published as WO 98/22459, discussed *supra* under the 35 U.S.C. § 103 heading. Thus, the '345 patent fails to render the claimed compounds obvious, just as the '459 publication fails to.

Again, the compound synthesized in, for example, Example 7 (I-7), has affinity and selectivity for the 5-HT<sub>1A</sub> receptor similar to the most efficacious compound disclosed in the '459 publication (I-66), but surprisingly elicits far stronger binding of [<sup>35</sup>S]GTPγS in a cell-membrane preparation (see the table on page 31 of the specification). The instantly-claimed compounds are the strongest agonists identified to date, with efficacies close or indiscernible from serotonin (5-HT), a native receptor ligand. Because the instantly claimed compounds exhibit both unexpected and superior results relative to those disclosed in the '345 patent, the '345 patent does not render

them obvious. Withdrawal of the rejection and reconsideration of the claims is courteously solicited.

U.S. Patent No. 6,448,268 also fails to render any of the claimed compounds obvious. Claim 1 has been amended to require that either X represents a nitrogen atom and Y represents a carbon atom linked to a hydrogen atom (CH); or X represents a carbon atom linked to a hydrogen atom (CH) and Y represents nitrogen atom. The '268 patent fails to disclose either of these variations. Applicant respectfully points out that, in addition to these (and other) differences in the claimed compounds, the '268 patent is directed to ethylamino compounds, not methamino compounds, of the instant case. Accordingly, none of the instant claims are obvious in view of the '268 patent. Withdrawal of the rejection and reconsideration of the claims is respectfully requested.

#### **CONCLUSION**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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